reversal from NMB, 30% use of neostigmine), and 2) sugammadex used in all cases. We estimated costs associated with NMB and time when operation rooms are occupied. Calculations were made for a typical Russian hospital providing 5000 surgeries per year, 160 of them performed with rocuronium-induced NMB. The model inputs included current practice patterns derived from the survey of experts, data on the recovery time from NMB and rates of residual NMB and its complications were taken from published sources. Costs were estimated on the basis of data on governmental tenders and reimbursement rates for services in the compulsory medical insurance system. **RESULTS:** Introduction of sugammadex can decrease number of residual NMB cases by 93,6% and save 70 hours in operation room due to shorter period till extubation in comparison with base case scenario. The overall spending related to general anesthesia increased by EURO 20,510. In case of rational hospital management saved operating time could be used for providing extra surgeries that will generate additional revenue of EURO 14,395 – 48,041 for a hospital, depending on the type of surgery provided in a saved time. **CONCLUSIONS:** The reduction of recovery time with sugammadex may generate additional revenue for the hospital and improve access to health care for public. Still optimization of workflow processes is necessary.

PMS25

## BUDGET IMPACT ANALYSIS OF BIOLOGIC DRUGS FOR TREATMENT OF POLIARTICULAR JUVENILE RHEUMATOID ARTHRITIS IN RUSSIA

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**OBJECTIVES:** To assess impact on the 3-year health care budget of 3 biologic drugs (BD) – abatacept, adalimumab and etanercept – provided for all eligible children with poliarticular juvenile rheumatoid arthritis (JRA) not responding to the standard therapy **METHODS:** The indirect comparison of the results of randomized controlled trials (RCT) demonstrated that compared BD have approximately the same effect on the rate of disease flares in children with poliarticular JRA. We developed four scenarios assessing direct costs (drugs, medical services and sick leave payments for parents caring for children) bared by the government during 3-years period in base case and in cases of provision of one of compared BD for all children with poliarticular JRA. The hypothesis was that introduction of BD decreases the rate of disease flares and thus reduces related costs. The potential reduction of costs related to disability was not assessed due to the lack of data. The model inputs were derived from Russian cost of illness analysis of JRA and RCTs on the efficacy of BD. The costs estimation was based on the average wholesale price of BD and reimbursement rates in the compulsory medical insurance system. **RESULTS:** The lowest costs are expected in the scenario with abatacept – EURO 63 mln in comparison with EURO 81.62 mln for etanercept and EURO 134.18 mln for adalimumab. Adoption of BD would reduce the costs of hospital treatment and sick leave payments for the caring parents by 14-17%. Overall the increase of budget spending during 3 year period per 1 patient receiving BD varies from EURO 10,328 (abatacept) to EURO 23,255 (adalimumab). **CONCLUSIONS:** Supplying with BD all eligible children with JRA requires high additional spending of the health care budget, the least burden is imposed by the adoption of abatacept in comparison with etanercept and adalimumab.

PMS26

## STRATAFIX™ KNOTLESS TISSUE CONTROL DEVICE: A BUDGET IMPACT ANALYSIS FROM ITALIAN HEALTH SERVICE PERSPECTIVE

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**OBJECTIVES:** STRATAFIX™ Knotless Tissue Control Device is a new medical device. With significantly more points of fixation than traditional sutures, STRATAFIX™ gives surgeons more consistent tension control over every pass, and combine the strength and security of interrupted closure with more efficiency than continuous closure. A Budget impact analysis was developed to estimate the cost saving associated with use of new technology from the Italian Health Service perspective over a 1 year time horizon. **METHODS:** A literature review was conducted to evaluate the time savings in different procedures: hysterectomy and myomectomy (Gynecology), breast reconstruction and abdominoplasty (Plastic Surgery), prostatectomy and nephrectomy (Urology), hip and knee replacement (Orthopedics). Moreover, a survey with clinicians was conducted to estimate the number of sutures used for the different procedures. The means and 95% confidence interval (95%-CI) for the budget impact were estimated using bootstrap methods (10.000 simulations) assuming lognormal distribution for costs and time data, and beta distribution for percentage data. **RESULTS:** Cost savings per procedure with STRATAFIX™ would be 217 € and 227 € for hysterectomy and myomectomy respectively, 274 € and 60 € for breast reconstruction and abdominoplasty, 56 € and 230 € for prostatectomy and nephrectomy, 48 € and 50 € for hip and knee replacement. Considering the evolution of annual procedures performed with the introduction of STRATAFIX™, the cost saving associated will be about 1.340.129 € (95%-CI: 218.530- 3.089.771 €): 30% for myomectomy, 26% for breast reconstruction and 22% for hysterectomy. **CONCLUSIONS:** The additional costs for this new medical device permits to generate appropriateness and to reallocate staff and operation rooms for other activities. STRATAFIX™ technology appears cost-saving for the reduction of procedure time. The results were consistent according to the developed probabilistic sensitivity analysis, STRATAFIX™ leads to cost savings in 99% of the simulation.

PMS27

## GLOBAL VARIATIONS IN BIOLOGICS ACCESS AND RHEUMATOID ARTHRITIS TREATMENT COSTS

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**OBJECTIVES:** Biological therapy is effective at slowing disease progression in Rheumatoid Arthritis (RA), particularly in severe RA. Recent clinical trials also demonstrated efficacy of biologics for moderate RA. However, access to biologics varies substantially by country, in part due to differing eligibility criteria of reimbursement policies. Here we investigated the proportion of patients who receive biologics, and whether eligibility criteria were correlated with total costs per RA patient across a range of countries. **METHODS:** PubMed searches were performed to establish which countries reimburse biologics for RA treatment. Eligibility requirements, percentage of patients who received biologics and cost per patient were extracted from a variety of sources. Simple regression analysis was used to compare total cost of RA treatment per patient and severity of RA (DAS score) required for biologic access. **RESULTS:** Regarding eligibility criteria, 16 out of 21 countries restricted biologics to patients with severe RA (DAS score >5.1) and/or who failed 2 previous DMARDs. Eligibility was linked to reimbursement policy for 14 countries. New Zealand had the most stringent reimbursement criteria, with only 1 biologic reimbursed and limiting eligibility to severe, active erosive RA >6 months, 4 failed DMARDs including MTX, and DAS score >5.1. Taking into account the relative prevalence of RA, 20% of RA patients received biologics in Norway and Belgium, 10% in the UK, 9% in Australia, 5% in Germany and Italy and only 3% in New Zealand and Austria. Out of 14 countries, there was poor correlation between total cost of RA treatment per patient and the severity of RA required for biologics access (R Square: 0.09, p=0.29). **CONCLUSIONS:** Reimbursement policies for biologics in RA vary substantially between countries, as does the proportion of RA patients who receive biologics. No significant correlation was found between cost per patient and DAS score required for biologics treatment.

PMS28

## ASSESMENT OF THE COST OF BIOLOGICAL THERAPY IN RHEUMATIC DISEASES: ECONOMIC IMPACT OF DOSAGE MODIFICATION IN CLINICAL PRACTICE

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**OBJECTIVES:** To evaluate the real annual cost of biological therapies (BT) in rheumatic diseases in a tertiary hospital in 2012 and to compare the real annual spending, in daily clinical practice, with theoretical costs with conventional doses. To analysis the reduction of costs after creating BT outpatient clinic. **METHODS:** Cost minimization analysis based on an observational, cross-sectional study. Patients with different rheumatic diseases in follow-up by Rheumatology service in Hospital Carlos Haya(Spain) who have been treated with BT under conventional and modified doses were included. *Outcome 1º*: Annual average cost (in Euros) of BT in patients with rheumatic diseases in clinical practice compared with theoretical cost.*Secondary Variables*: cost reduction in Euros after implantation of a specialized outpatient clinic of BT. *Dose reduction protocol*: After 6 months with label dose activity disease is assessed, if DAS28<2,6 or BASDAI<4, we reduce the standard dose and we reevaluate every 6 month. We performed a descriptive analysis of the sample. Cost minimization analysis to evaluate annual costs were carried out. **RESULTS:** A total of 478 patients were treated with BT in our service in 2012. Most of them were Reumatoid arthritis(265,55.4%). Theoretical annual cost in 2012, it would be of 5,647,969.35 Euros (11,791.17 Euros patient-year). However, during 2012 32 patients reduced doses of their biological therapy in clinical practice. This represented a saving of 146,129.67 Euros in 2012. From December 2012 until June 2013 in our outpatient clinic of BT, 76 patients went into remission or low disease activity and the biological drug dose was reduced. This dose modification resulted in a reduction of the total cost of 159, 004 Euros in 6 months associated with adequate disease control **CONCLUSIONS:** It is possible to reduce doses and associated costs of BT. The follow-up of patients in a specialized outpatient clinic leads to a better patient management and a cost reduction

PMS29

## BURDEN OF INFUSION-RELATED COSTS AND STAFF TIME FOR RHEUMATOID ARTHRITIS IN THE HOSPITAL SETTING

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**OBJECTIVES:** Rheumatoid arthritis (RA) is a chronic autoimmune disease affecting 0.6% of the population in the US. Current RA infusion therapy incurs substantial cost and time to the hospital and patient. The purpose of this study was to model the infusion and related staff costs within a hospital center to better understand the economic and time burden of RA infusion therapy. **METHODS:** We developed an Excel model to estimate the annual time and cost burden associated with RA infusion services in a hypothetical hospital center. We assumed patients received abatacept, tocilizumab, or rituximab monotherapy. Product package inserts informed the number of annual maintenance infusions (13 infusions for abatacept [30 minutes each] and tocilizumab [60 minutes each]; 4 infusions for rituximab [195 minutes each]) per patient. The model projected annual direct costs and total value of staff time for infusion drug administration, infusion-related services, facility-related services, laboratory tests, and patient/caregiver costs. Costs were derived from the literature and adjusted to 2012 USD; 29.5% allocated overhead was applied to laboratory, facility and infusion service costs. Time estimates were obtained from the literature and survey data, converted to annual wages using BLS data, and adjusted to 2012 USD. **RESULTS:** The baseline model estimated total infusion drug and service-related costs to be $24,645 for abatacept, $27,840 for rituximab, and $31,339 for tocilizumab. Roughly 54%, 62% and 58% of these annual costs are associated with hospital labor, respectively. Patient/caregiver costs, comprising of lost wages and indirect medical costs, were estimated to be $788 for abatacept, $793 for rituximab, and $1,063 for tocilizumab. **CONCLUSIONS:** Our findings show that direct and infusion-related contribute to a substantial economic and time burden to both the hospital and patient. These findings can help decison makers assess the relative benefits and cost implications of administering infusion drugs to RA patients.